Chapter 15 Review: Efficient & Equitable Taxation

Readings: Rosen: Chapter 15 pp 335 – 341
pp 344 (start with (Employer contribution to Benefit Plans) – 364
(end before “Treatment of International Income”)

Outline
I. Overview of the U.S. Income Tax
II. Treatment of Certain Types of Savings
   Savings is considered good for the economy. Is there anything the income tax code does to encourage savings?
   Hmmm … see “Employer Contributions to Benefit Plans” on p 344
   “Some Types of Savings” on p 344 – 346
III. Treatment of Mortgage Interest
IV. Some Misc. Tax Credits & Deductions
   Tax credit encourage/reward certain types of behavior.
   A. “kiddie credit “ (tax credit)
   B. Student Loan & other Education Expenses credit
   C. Earned income credit (s.t. phaseout)
   D. Deduction of mortgage interest
V. The Marriage Penalty
VI. Summary
   A. The income tax code is quite complex (piecemeal development)
   B. The income tax code is progressive
   C. The income tax code favors certain activities/behavior
      … such as ….

Problems
1. Draw a picture of the marginal income tax rates and average income tax rates, as a function of gross income, for a single person in the U.S. Assume the person has only one exemption (him or herself) and takes the standard deduction.

   Note: You don’t have to be exact on the levels of income at which the different brackets start. These cut-offs, after all change on a yearly basis. Your average tax rates also do not have to be exact. I am looking more for the relationship between the average and the marginal rates. However, you should be relatively precise on the marginal tax rates.
Do not give me a chart like that in figure 15.2 (p 357). I am looking only for the basic income tax schedule (as a function of gross, not taxable, income) and not for details such as the EITC, etc.

2. Below, you are given the income tax rate schedules for singles in the year 2000.

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard Deduction</strong></td>
<td>$ 4,400</td>
</tr>
<tr>
<td><strong>Exemption</strong></td>
<td>$ 2800/each</td>
</tr>
<tr>
<td><strong>0% Marginal Bracket</strong></td>
<td></td>
</tr>
<tr>
<td>Adj. Gross Income &lt; Deductions &amp; Exemptions</td>
<td></td>
</tr>
<tr>
<td><strong>15% Marginal Bracket</strong></td>
<td>$ 0 +</td>
</tr>
<tr>
<td>Adj. Gross Income - Deductions &amp; Exemptions over</td>
<td></td>
</tr>
<tr>
<td><strong>28% Marginal Bracket</strong></td>
<td>$ 26,250 +</td>
</tr>
<tr>
<td>Adj. Gross Income - Deductions &amp; Exemptions over</td>
<td></td>
</tr>
<tr>
<td><strong>31% Marginal Bracket</strong></td>
<td>$ 63,550 +</td>
</tr>
<tr>
<td>Adj. Gross Income - Deductions &amp; Exemptions over</td>
<td></td>
</tr>
<tr>
<td><strong>36% Marginal Bracket</strong></td>
<td>$ 132,600 +</td>
</tr>
<tr>
<td>Gross Income - Deductions &amp; Exemptions over</td>
<td></td>
</tr>
<tr>
<td><strong>39.6% Marginal Bracket</strong></td>
<td>$ 288,350 +</td>
</tr>
<tr>
<td>Gross Income - Deductions &amp; Exemptions over</td>
<td></td>
</tr>
</tbody>
</table>

Based on this information, calculate the following for each of the 3 siblings listed below: 1) total U.S. income taxes owe and 2) their average income tax rate \( \left( \frac{Total \ Income \ Taxes}{Gross \ Income} \times 100\% \right) \). Each person takes the standard deduction and one exemption (themselves). None receive the earned income tax credit or any other modifications. None of their earnings are from capital gains. All of their earnings are from wage income.

a. Gluteus grosses $38,000 a year.
b. Maximus grosses $75,000 a year.
c. Fanny grosses $200,000 a year.

3. a. What are the characteristics of couples receiving a (income tax) marriage bonus?

b. The June of 2001 (i.e. Bush) Tax cut increased the standard deduction and exemptions for married couples, as well as increased the incomes levels for which higher tax brackets kick in (i.e. reducing marginal tax rates for married couples) has been suggested as a way of reliving the “marriage penalty”. What will that do the number of couples receiving “marriage bonuses”?

4. In a near repeat of exam questions from the last two years, consider a proposal to replace the entire U.S. income tax system with a flat income tax with a rate of 24% … if it passes a voter referendum. Each individual will be given $10,000 deduction regardless of children, etc. No exemptions are given. Taxation will be based on individuals and not on families. No other type of measurable income will be exempt.

Below you have 6 people and some of their relevant characteristics. Indicate whether each person would gain from the proposed flat tax or lose from it. Clearly explain why they would gain or lose from such a change. Assume each person’s income is from wages unless explicitly stated. There are no other exemptions (i.e. dependents) unless stated.
You might wish to look at footnote 1 before answering some of these.¹

a. See if you can swallow this data. Epiglottis is single, has been taking the standard deduction, and has a gross income of $30,000. You might have to look at figures 3, 4, or 5 from the handout to see if this person would be doing better under the new system.

b. Uvula is single, has been taking the standard deduction, and has a gross income of $150,000. You might have to look at the handout to see if this person would be doing better under the new system.

c. I’ve heard that Malleus is single, has been taking the standard deduction, has six children, and earns $85,000.

d. The sound on the street is that Stapes is single, has been taking the standard deduction, has no children, and earns $85,000.

e. Here’s another to look. Fovea earns $75,000, is single, and has no children. She itemizes her deductions because she has lots of medical expenses and gives a lot to charity. Because she itemizes, her deductions are $13,200, three times the standard deduction.

f. Digit and Carpal are to married, hand in hand, in two weeks. Currently both are single, have no children, and are taking the standard deduction. They both gross $75,000 and pay $15,600/each as singles in income taxes under the current system. They will also pay $15,600 under the flat tax system. (Hint: Will they, as a married couple, pay more than or less than $15,600 under the current system).

5. Consider the following two married couples, both of whom earn $100,000 as a family. Neither has children. Both take the standard deduction. They are exactly alike except for how their earnings are split within the couple.

- Phlanges and Tarsal just recently footed it down the aisle and got married. Phlanges, up on her feet all day, grosses $100,000 and Tarsal grosses $0 (the bum) for a total family income of $100,000.

- Atrium and Ventricle just expressed their heartfelt love for each other in a marriage ceremony. Each grosses $50,000 a year for a total family income of $100,000.

- Which family pays more in income taxes?

6. Describe the evolution of the income tax marriage penalty. Was there always a marriage penalty in the United States? If not, how did it evolve? What was the rational behind each of the changes?

¹ Hint for these questions: For singles taking the standard deduction and 1 exemption, $75,000 in gross income is about the break-even point between the two systems. Singles (again taking the standard deduction and 1 exemption) grossing below $75,000 pay less under the current system. Singles (again taking the standard deduction and 1 exemption) grossing more than $75,000 pay less under the flat tax described.
7. There is not marriage (income tax) penalty in Canada. Explain why this is. Are there any marriage or family related drawbacks to the Canadian system?

8. Radius and Ulna, twin sisters, have done almost everything arm in arm. They both have the same gross income. They are both smart, rational people, who respond to incentives. They work themselves to the bone to get the best information and make the best choices.

Radius has managed to shelter more of her income (she itemizes deductions very thoroughly instead of taking the standard deduction, etc) from taxes so she is only in the 15% income tax bracket. Since she pays less in income taxes, her disposable income is higher than Ulna’s.

Ulna, with the same gross income, is in the 27.5% tax bracket. She has sheltered less of her income and therefore is in a higher tax bracket. Since Ulna has higher taxes with the same gross income, she has a lower disposable income.

Radius and Ulna go house shopping. Ulna, despite her lower disposable income, takes out the bigger mortgage and buys the bigger house.

- Explain what (tax) incentives most likely caused Ulna to choose the bigger house and more mortgage debt. (The answer may be simpler than the length of this question would imply.)

9. List some ways to save for your future and avoid or reduce taxes you would otherwise have to pay on your savings.

10. List some other activities, not referred to in the above questions, favored by the U.S. income tax code. Briefly explain how the income tax code favors these.